

Claims

1. An image display device comprising:
an image display part for displaying an image; and
a plurality of dummy pixels which are arranged in a periphery of the image display part, wherein
the plurality of dummy pixels are pixels to which a voltage is applied based on pixel electrodes and common electrodes corresponding to the dummy pixels,
a first potential difference between a voltage of pixel electrodes of the dummy pixels to which a given gray scale voltage of positive polarity is written among the plurality of dummy pixels and a common voltage applied to the common electrodes corresponding to the dummy pixels is detected,
a second potential difference between a voltage of pixel electrodes of the dummy pixels to which a given gray scale voltage of negative polarity is written among the plurality of dummy pixels and the common voltage applied to the common electrodes corresponding to the dummy pixels is detected, and
the voltage applied to the common electrodes is controlled so as to make the first potential difference and the second potential difference equal to each other.

2. An image display device according to claim 1, wherein the image display device adopts a common electrode inversion method as an AC driving method and the common voltage of negative polarity when the given gray scale voltage of positive polarity

is written in the plurality of dummy pixels and the common voltage of positive polarity when the given gray scale voltage of negative polarity is written in the plurality of dummy pixels are controlled so as to make the first potential difference and the second potential difference equal to each other.

3. An image display device according to claim 1, wherein the image display device adopts a common electrode symmetry method as an AC driving method and the common voltage when the given gray scale voltage of positive polarity or negative polarity is written in the plurality of dummy pixels is controlled so as to make the first potential difference and the second potential difference equal to each other.

4. An image display device according to claim 1, wherein the given gray scale voltage is a gray scale voltage of maximum gray scale.

5. An image display device according to claim 1, wherein the given gray scale voltage is a gray scale voltage of minimum gray scale.

6. An image display device according to claim 1, wherein the given gray scale voltage is an arbitrary gray scale voltage between a gray scale voltage of maximum gray scale and a gray scale voltage of minimum gray scale.

7. An image display device comprising:

an image display part for displaying an image; and
a plurality of dummy pixels which are arranged in a

periphery of the image display part, wherein
the plurality of dummy pixels include pixel electrodes,
and

the image display device further includes
a first means which detects a potential difference between
a voltage of the pixel electrodes of the dummy pixels to which
a given gray scale voltage of positive polarity is written among
the plurality of dummy pixels and a common voltage applied to
common electrodes,

a second means which detects a potential difference
between a voltage of the pixel electrodes of the dummy pixels
to which a given gray scale voltage of negative polarity is
written among the plurality of dummy pixels and the common
voltage applied to the common electrodes, and

a control means which controls the voltage applied to
the common electrodes so as to make the first potential
difference detected by the first means and the second potential
difference detected by the second means equal to each other.

8. An image display device according to claim 7, wherein
the image display device adopts a common electrode inversion
method as an AC driving method and the control means controls
the common voltage of negative polarity when the given gray
scale voltage of positive polarity is written in the plurality
of dummy pixels and the common voltage of positive polarity
when the given gray scale voltage of negative polarity is written

in the plurality of dummy pixels so as to make the potential difference detected by the first means and the potential difference detected by the second means equal to each other.

9. An image display device according to claim 7, wherein the image display device adopts a common electrode symmetry method as an AC driving method, and

the control means controls the common voltage when the given gray scale voltage of positive polarity or negative polarity is written in the plurality of dummy pixels so as to make the potential difference detected by the first means and the potential difference detected by the second means equal to each other.

10. An image display device according to claim 7, wherein the given gray scale voltage is a gray scale voltage of maximum gray scale.

11. An image display device according to claim 7, wherein the given gray scale voltage is a gray scale voltage of minimum gray scale.

12. An image display device according to claim 7, wherein the given gray scale voltage is an arbitrary gray scale voltage between a gray scale voltage of maximum gray scale and a gray scale voltage of minimum gray scale.

13. An image display device comprising:

an image display part; and

a plurality of dummy pixels, wherein

the plurality of dummy pixels are pixels to which a voltage is applied based on pixel electrodes and common electrodes corresponding to the dummy pixels, and

a voltage applied to the common voltage is controlled so as to make a potential difference between a voltage of pixel electrodes of the dummy pixels to which a given grayscale voltage of positive polarity is written among the plurality of dummy pixels and a common voltage applied to the common electrodes and a potential difference between a voltage of pixel electrodes of the dummy pixels to which a given grayscale voltage of negative polarity is written among the plurality of dummy pixels and the common voltage applied to the common electrodes equal to each other.